

Amdt. dated April 26, 2005  
Reply to Office action of Jan. 26, 2005

Serial No. 09/882,243  
Docket No. BLD920000050US1  
Firm No. 0036.0082

**Amendments to the Drawings**

The attached sheet of drawings includes changes to FIGS. 1. This sheet, which includes FIG. 1, replaces the original sheet including FIG. 1.

Attachment: Replacement Sheet

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#### REMARKS/ARGUMENTS

The Examiner objected to FIG. 1 on the grounds that the pages shown generated from the publishing tool 18 should be labeled "22a, 22b, 22c" instead of "20a, 20b, 20c". Applicants submit herewith a replacement sheet for FIG. 1 making this correction to change the pages 20a, 20b, 20c outputted from the publishing tool 18 to "22a, 22b, 22c" to overcome this objection to the drawings.

The Examiner objected to the drawings because there was no description in the Specification of element 74 in FIG. 2. Applicants amended paragraph [0031] on page 10 of the Specification to include a reference to "74" to overcome this objection.

The Examiner objected to the drawings because there was no description in the Specification of block 132 in FIG. 3. Applicants amended paragraph [0032] on pages 10-11 of the Specification to include a reference to block 132 to overcome this objection.

The Examiner objected to the drawings because there was no description in the Specification of block 220 in FIG. 4b. Applicants amended paragraph [0036] on pages 13-14 of the Specification to include a reference to block 220 to overcome this objection to the drawings. This amendment also overcomes the Examiner's objection to the Specification on page 3.

The Examiner objected to claim 8 for failing to claim dependency from another claim. Applicants amended claim 8 to overcome this objection.

1. Claims 1-9, 11-14, 16-24, 26-29, 31-39 and 41-44 are Patentable Over the Cited Art

The Examiner rejected claims 1-9, 11-14, 16-24, 26-29, 31-39 and 41-44 as anticipated (35 U.S.C. §102(b)) by Tai (U.S. Patent No. 5,239,390). Applicants traverse these rejections for the following reasons.

Independent claims 1, 16, and 31 concern managing a multi-page document, and require: receiving a plurality of input files including digital representations of multiple pages of a document, wherein the content of each entire page is represented in a first representation format, wherein the entire page content is capable of including content of a first content type and second content type; and for each page of the document represented in the input files, performing: (i) determining regions in the page including content of the second content type; (ii) processing each determined region in the page to generate the content for each region in a second representation format; and (iii) adding the content of the entire page in the first representation

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format and the content of each region in the second representation format to at least one output file; and (iv) storing the output file.

Applicants amended these claims to include reference number "iv" for the last limitation.

The Examiner cited col. 6, line 31 to col. 7, line 45 as disclosing the claim requirement of adding the content of the entire page in the first representation format and the content of each region in the second representation format to at least one output file that is stored. (Office Action, pg. 4) Applicants traverse.

The cited col. 6, line 31 to col. 7, line 23 discusses how a document is scanned and that a determination is made of a contrast and variance of a dot region. If the contrast or variance is greater than the value, a partial dot is selected for the region, otherwise a mixed dot is selected. The image is then reproduced by the printer with the specific dot region rendered in either the partial or mixed dot type.

Nowhere does the above cited cols. 6-7 disclose adding the content of the entire page in the first representation format and the content of each region in the second representation format to at least one output file that is stored, so that the stored file has the representation of the page with both types of content in the first presentation format and additionally the content of each region including the second content type in a second presentation format. Thus, the second content type in the document is maintained in two presentation formats. The cited col. 6 discusses providing different dot styles depending on the variance of the region. Nowhere does the cited col. 6 disclose maintaining all content types in the document in a first representation format and additionally maintaining the second content type in the additional second representation format.

The cited col. 7, lines 35-45 mentions that an analysis of the image is performed and that a filter operation is applied to the image region and that the controller will not alter those pixels along the text border and bypass the filter. Those pixels in the low contrast region and halftone region are filtered, so that the text contrast is maintained and the noise and the halftone screen are smoothed. This processed image is stored.

The cited col. 7 mentions that pixels on the text border are not filtered but pixels in a low contrast and halftone region are filtered. Nowhere does the above cited col. 7 disclose adding the content of the entire page in the first representation format and the content of each region in the second representation format to at least one output file that is stored. For instance, nowhere does

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the cited col. 7 mention that the entire document, including both low contrast region and text border, is stored in a first representation. Instead, the parts of the document are processed differently, such that some regions are filtered and other regions are not. Nowhere does the cited col. 7 disclose that the stored file has the representation of the page with both types of content in the first presentation format and additionally the content of each region including the second content type in a second presentation format.

Accordingly, claims 1, 16, and 31 are patentable over the cited Tai because the cited Tai does not disclose all claim requirements.

Claims 2-15, 17-30, and 32-45 are patentable over the cited art because they depend from one of claims 1, 16, and 31, which are patentable over the cited art for the reasons discussed above. Moreover, the below discussed dependent claims provide additional grounds of patentability over the cited art.

Claims 3, 18, and 33 depend from claims 1, 16, and 31 and further require that the first representation format comprises a device dependent image format and the second representation format comprises a device independent image format. The Examiner cited col. 2, lines 60-66, col. 4, lines 27-30 and col. 6, lines 42-45 as disclosing the additional requirements of these claims. (Office Action, pg. 5) Applicants traverse.

The cited col. 2 mentions that a document is scanned into a pixel value and may consist of different image types such as text, halftone picture, and continuous tone. All of them need to be rendered into a binary or multi-bit gray scale. The cited col. 4 mentions that an image can have different types of images. Nowhere do the cited cols. 2 and 4 anywhere disclose or mention that the first presentation format in which the entire page is represented is a device dependent image format and that the second presentation format including the determined regions of the second content type is in a device independent image format. Nowhere is there any disclosure of device dependent and independent formats for the entire document and the second content type.

The cited col. 6 mentions that the rendering technique uses both partial dot and mixed dot for the different content types, text, halftone, and continuous tone images. Nowhere does the cited col. 6 anywhere disclose or mention the claim requirement that the first presentation format in which the entire page is represented is a device dependent image format and that the second presentation format including the determined regions of the second content type is in a device independent image format. Instead, the cited col. 6 just discusses different dot types for

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different regions, and provides no disclosure of device dependent and independent formats for the entire document and the second content type.

Accordingly, claims 3, 18, and 33 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Tai.

Claims 8, 23, and 38 depend from claims 1, 16, and 31 and further require selecting the output files to render and for each page of the document represented in the selected output files, performing: (i) accessing the content of the entire page in the first representation format; (ii) accessing the content for each region in the page in the second representation format; (iii) processing the content for each region in the page in the second representation format to generate the content for each region in the first representation format; (iv) merging the content for the entire page and the content for each region in the first representation format into page output in the first representation format; and (v) rendering the page output for each page into a human observable format.

The Examiner cited col. 4, line 31 to col. 5, line 2 as disclosing the claim requirement of processing the content for each region in the page in the second representation format to generate the content for each region in the first representation format. (Office Action, pg. 6) Applicants traverse.

The cited cols. 4-5 discuss how the document is scanned and modified and provided as gray level signals to a printer. In grey level printing, each pixel has the capability to render different dot sizes for the different grey levels. The cited cols. 4-5 discuss grey scale levels. Nowhere do the cited cols. 4-5 disclose processing regions in the page in a second representation form to generate that content for each region in the first representation format, which is the format in which the entire page is represented. Nowhere do the cited cols. 4-5 discuss processing content in the second representation format to the first generation format.

The Examiner cited col. 6, line 67 to col. 7, line 14 as disclosing the claim requirement of merging the content for the entire page and the content for each region in the first representation format into page output in the first representation format. (Office Action, pg. 6) Applicants traverse.

The cited cols. 6-7 discuss that a partial dot is rendered for text and halftone because these are higher contrast and the mixed dot is rendered for the continuous tone region. Thus, the cited cols. 6-7 discuss rendering different content types in the document in different dot formats.

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However, nowhere does this cited section of Tai disclose the claim requirement of merging the content for the entire page and the content for each region in the first representation format into page output in the first representation format. Instead, the cited Tai would generate different dot types for different regions and then render those two types. This does not disclose or suggest merging the content for the entire page including both content types with the region in the first representation format.

Accordingly, claims 8, 23, and 38 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Tai.

Claims 9, 24, and 39 depend from claims 8, 23, and 38 and further require that each output file includes one data structure for the content of the entire page in the first representation format and one additional data structure of the content for each determined region in the second representation format. The Examiner cited col. 4, lines 26-65, col. 6, lines 31-45, and col. 6, line 67 to col. 7, line 14 as disclosing the additional requirements of these claims. (Office Action, pg. 7) Applicants traverse.

The cited col. 4 discusses how digitized documents may represent pixels as grey scale signals, where grey scale levels have different dot sizes that produce different visual responses. The cited col. 6 mentions that different dot types may be used to produce a satisfactory image, and that the rendering technique uses both partial dot and mixed dot types according to the local image content.

Although the cited cols. 4 and 6 discuss how the content may be rendered with different dot types, nowhere does the cited Tai disclose that an output file has one data structure for the content of the entire page in the first representation format and one additional data structure of the content for each determined region in the second representation format. Nowhere do the cited cols. 4 and 6 disclose or mention how the image data is stored, such that the entire page is stored in one data structure in the first representation format and that an additional data structure is provided for each determined region. There is no mention in the cited Tai of having different data structures to store the page components in different representation formats.

Accordingly, claims 9, 24, and 39 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Tai.

Claims 11, 26, and 41 depend from claims 8, 23, and 38 and further require determining if a high quality option is selected, wherein the step of processing the content for each region in

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the second representation format to generate the content for each region in the first representation format and merging the content for the entire page and each page region is only performed if the high quality option is selected.

The Examiner found that col. 8, lines 30-57 of Tai discloses the additional requirements of these claims. (Office Action, pg. 7) Applicants traverse.

The cited col. 8 discusses how to classify regions in the document as halftone or text or low or high contrast. This distinction is made so as to reproduce the original image to maintain the text contrast in the text region and have the screen structure smoothed in the halftone region to filter noise.

Although the cited col. 8 discusses how to classify regions of the document as text or halftone, nowhere does the cited col. 8 provide a specific operation for processing the content regions of the second type in the second representation format depending on whether a high quality option is selected. There is no disclosure in the cited col. 8 of a high quality option as claimed.

Accordingly, claims 11, 26, and 41 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited Tai.

Claims 12, 27, and 42 are also patentable over the cited art because they provide alternative processing, rendering the content of the entire page in the first representation format if the high print quality is not selected, based on a high quality option. As discussed, nowhere does the cited Tai disclose a high quality option which controls how the page in the first representation format is generated.

Applicants amended claims 12, 27, and 42 to change "high print quality" to "high quality option".

2. Claims 10, 25, and 40 are Patentable Over the Cited Art

The Examiner rejected claims 10, 25, and 40 as obvious (35 U.S.C. §103)a) as unpatentable over Tai in view of Delhounc (U.S. Patent App. No. 2002/0178950). Applicants traverse.

Claims 10, 25, and 40 are patentable over the cited art because they depend from claims 1, 16, and 31, which are patentable over the cited art for the reasons discussed above and because

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the combination of the base claims and dependent claim requirements provide further grounds of patentability over the cited art.

3. Claims 15, 30, and 45 are Patentable Over the Cited Art

The Examiner rejected claims 15, 30, and 45 as obvious (35 U.S.C. §103)a) as unpatentable over Tai in view of Willis (U.S. Patent App. No. 5,568,571). Applicants traverse.

Claims 15, 30, and 45 are patentable over the cited art because they depend from claims 1, 16, and 31, which are patentable over the cited art for the reasons discussed above and because the combination of the base claims and dependent claim requirements provide further grounds of patentability over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-45 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0563.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

Dated: April 26, 2005

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